

AMENDMENTS TO THE CLAIMS

Claims 1-18 (Cancelled)

19. **(Currently Amended)** A process for producing a catalyst for olefin cracking, the processing comprising the steps of providing an MFI-type crystalline silicate catalyst, heating the catalyst in steam to remove aluminum from the crystalline silicate framework and extracting aluminum from the catalyst by contacting the catalyst with a complexing agent for aluminum to remove from pores of the framework aluminum deposited therein during the steaming step thereby to increase the silicon/aluminum atomic ratio of the catalyst; and calcining the catalyst at elevated temperature; formulating said MFI type crystalline silicate catalyst with a binder comprising silica to produce catalyst particles in a formulation of said MFI type crystalline silicate and silica binder ~~The process of claim 18~~ wherein said MFI crystalline silicate catalyst is formulated with said silica binder to produce said catalyst particles prior to heating said catalyst in steam to remove aluminum from the crystalline silicate catalyst framework and extracting aluminum from the pores of the catalyst framework.

20. **(Previously Presented)** The process of claim 19 wherein said silica is employed in an amount to provide catalyst particles of said silica binder and said MFI type crystalline silicate catalyst containing at least 20% silica.

21. **(Previously Presented)** The process of claim 20 wherein said silica binder is present in an amount of about 50 wt.%.

22. **(Cancelled)**

23. **(Previously Presented)** A process for producing an olefin cracking catalyst comprising:

(a) providing an MFI type crystalline silicate catalyst containing aluminum and silicon in the catalyst framework to provide an initial silicon/aluminum atomic ratio;

(b) formulating said crystalline silicate catalyst with a silica binder to produce catalyst particles containing said MFI crystalline silicate and silica binder;

(c) subsequent to the formation of said MFI crystalline silicate-binder catalyst particles, subjecting said catalyst particles to steaming to remove aluminum from the framework of the crystalline silicate catalyst;

(d) thereafter dealuminating said catalyst by treating said catalyst particles with a complexing agent for aluminum to remove aluminum by extraction from the pores of said catalyst during the steaming step and provide a silicon/aluminum atomic ratio greater than said initial silicon/aluminum atomic ratio; and

(e) calcining said catalyst particles at an elevated temperature.

24. **(Previously Presented)** The process of claim 23 wherein said MFI crystalline silicate catalyst at the conclusion of the extraction of aluminum had a silicon/aluminum atomic ratio of at least 180.

25. **(Previously Presented)** The process of claim 23 wherein said MFI crystalline silicate catalyst at the conclusion of the extraction of aluminum has a silicon/aluminum atomic ratio of at least 300.

26. **(Previously Presented)** The process of claim 23 wherein said MFI crystalline silicate catalyst is a catalyst of the ZSM-5 type which prior to the steaming and extracting procedure, had a silicon/aluminum atomic ratio of less than 80.

27. **(Previously Presented)** The process of claim 23 wherein said MFI type crystalline silicate is a catalyst of the silicalite type, which prior to the steaming and extraction had a silicon/aluminum atomic ratio of at least 120.

28. **(Previously Presented)** The process of claim 27 wherein said MFI type crystalline silicate at the conclusion of the extraction of aluminum has monoclinic symmetry.